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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/018,571	04/25/2002	Hiroaki Kitano	KAK-004	5012

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EXAMINER

FERNANDEZ RIVAS, OMAR F

ART UNIT	PAPER NUMBER
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2129

DATE MAILED: 10/06/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/018,571

Applicant(s)

KITANO ET AL.

Examiner

Omar F. Fernández Rivas

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 July 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 12-17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 12-17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 April 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
- Paper No(s)/Mail Date A1, A2, A3

- 4) ☐ Interview Summary (PTO-413)
- Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

PD

DETAILED ACTION

1. Claims 12-17 are pending on this application.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless – (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 12-17 are rejected under 35 U.S.C. 102(b) as being anticipated by Koza (US Patent # 5,136,686, referred to as **Koza**).

Claim 12 and 17

Koza anticipates a method of operating a data processing system (**Koza**, abstract: 1-4) which estimates candidate networks that are descriptive of relationships between interrelated elements as a network and that, when data generated by said elements from said network is given, are capable of reproducing data based on said data given (**Koza**, C 88: 53-61; Examiner Note(EN): the purpose of performing a genetic algorithm is to determine possible solutions to a given problem; the elements on a network can generate data and produce an output based on that data), said network being represented by a triplet comprising a network structure (**Koza**, C 89: 24-30); a parameter set

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(**Koza**, C 89: 32-39); and a degree of fitness between said data given and data reproducing from the network structure and the parameter set (**Koza**, C 99: 59-63), said method comprising the steps of generating a plurality of candidate networks by:

producing network structures based on the partially known network structures, which may allow for reproduction of said data given (**Koza**, C 99: 58; EN: producing a result is producing a network);

producing corresponding parameter sets and degrees of fitness (**Koza**, C 99: 59-63; EN: the algorithm changes the parameters in the previous solution in order to provide a better solution);

optimizing said networks utilizing the degrees of fitness (**Koza**, C1 :19-22; EN: genetic algorithms rely on fitness to optimize the solutions);

storing the optimized candidate networks in a first memory means (**Koza**, C 99: 59; EN: the result must be stored in some memory in the computer so that it can be operated upon); and

narrowing down appropriate candidate networks from said networks stored in the first memory means, using data different from said given data and that can be generated from network structures which are mutants or crossovers, and storing the networks in a second memory means (**Koza**, C 100: 6-19; Fig. 3; EN: a genetic algorithm is an iterative process where only the subjects with the highest fitness are retained) .

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Claim 13

Koza anticipates the optimization using the degree of fitness in said step of generating said plurality of candidate networks comprises steps of:

selecting N network structures from the produced network structures (Koza, C 22: 63-64; EN: entities are network structures stored in the computer to which all new successive entities will be compared);

producing N network structures from said selected N network structures (Koza, C 23: 35-37; EN: crossover, permutation and reproduction will produce new network structures);

adapting M parameter sets to each of the 2N networks utilizing degree of fitness to generate the networks (Koza, C 25: 52-53)

and selecting P networks of high degree of fitness from the generated 2N x M networks (Koza, C 99: 64-68, C 100: 1-2; Fig.3, item 1316).

Claim 14

Koza anticipates the optimization using the degree of fitness in said step of generating said plurality of candidate networks further comprises steps of:

searching the vicinity of said selected P networks and replacing the network when finding a network of higher degree of fitness (Koza, C 99: 64-68).

Claim 15

Koza anticipates wherein the optimization using the degree of fitness in said step of generating said plurality of candidate networks comprises:

a step of estimating parameters using a genetic algorithm, simulated annealing, and/or an optimization technique such as the hill-climbing method (Koza, abstract: 1-2).

Claim 16

Koza anticipates a computer program embodied on a computer readable medium comprising code means adapted to perform all the steps of claim 12 when said program is run on a data-processing system (Koza, C 99: 51-57).

Response to Arguments

3. In light of the fact that claims 1-11 were canceled, the rejection based on 35 U.S.C. 101 is withdrawn.

4. In light of the fact that claims 1-11 were canceled, the rejection based on 35 U.S.C. 102 is withdrawn.

5. The applicant states that Koza fails to disclose, teach or suggest either the steps found with claim 13 and the claims dependent thereon, or the features found within claim 18 (The examiner assumes the applicant refers to claim 12 and 17 since claim 12 is an independent claim and there is no claim 18).

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The examiner considers that all of the limitations disclosed ⁱⁿ claims 12 and 17 are anticipated by Koza as set forth above. Therefore the claims can not be allowed.

Conclusion

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Correspondence Information

7. Any inquires concerning this communication or earlier communications from the examiner should be directed to Omar F. Fernández Rivas, who may be reached Monday through Friday, between 8:00 a.m. and 5:00 p.m. EST. or via telephone at (571) 272-2589 or email omar.fernandez.rivas@uspto.gov.

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If you need to send an Official facsimile transmission, please send it to (571) 273-8300.

If attempts to reach the examiner are unsuccessful the Examiner's Supervisor, Anthony Knight, may be reached at (571) 272-3687. Hand-delivered responses should be delivered to the Receptionist @ (Customer Service Window Randolph Building 401 Dulany Street Alexandria, VA 22313), located on the first floor of the south side of the Randolph Building.

Omar F. Fernández Rivas
Patent Examiner
Artificial Intelligence Art Unit 2129
United States Department of Commerce
Patent & Trademark Office



Anthony Knight
Supervisory Patent Examiner
Group 3600

Wednesday, September 29, 2005

OFR